

**ENGINEERING SCHOOL OF LORENA - EEL/USP**  
**GRADUATE PROGRAM IN INDUSTRIAL BIOTECHNOLOGY - PPGBI**  
**NOTICE OF MASTER'S, DOCTORATE, AND DIRECT DOCTORATE SELECTION**

Applications are open at EEL-USP for the Graduate Program in Industrial Biotechnology (PPGBI): Master's, Doctorate, and Direct Doctorate courses. Applications must be submitted via email:

[ppgbi@eel.usp.br](mailto:ppgbi@eel.usp.br)

Important dates for the selection process are described in Item "8" of this notice.

**Number of positions: 4 (four) for master's\* and 12 (twelve) for Doctorate or Direct Doctorate.**

**\*IMPORTANT NOTE**

**THE PPGBI DOES NOT HAVE MASTER'S SCHOLARSHIPS AVAILABLE FOR IMPLEMENTATION IN  
2025**

**1. DOCUMENTS REQUIRED FOR MASTERS SELECTION APPLICATION**

**1.1. Application Form:**

- The application form is available at Application Form Link:  
<https://cpg.eel.usp.br/aluno/formularios/inscricao-para-selecao>.

**1.2. Copy of Diploma or Declaration of Graduation Completion:**

- Must include the date of graduation.
- Candidates in their final semester are exempt from providing the diploma or declaration at this stage; these documents are essential for enrollment if the candidate is accepted.

**1.3. Annex 1:**

- Must be completed, including only the curricular items to be scored in the selection process. Attach simple copies of the corresponding proofs. The required proofs include:

**1.3.1.** Copies of the first pages of publications in journals, and for articles accepted for publication, proof of acceptance (*e.g.*, an email from the journal editor).

**1.3.2.** Copies of the covers of published books showing the authors' names, and for book chapters, include the first page of the chapter.

**1.3.3.** Copies of the entire content of full papers published in conference proceedings.

**1.3.4.** Copies of abstracts published in conference proceedings.

**1.3.5.** Copy of proof of oral presentation of work at a conference.

**1.3.6.** Copy of a document proving participation in scientific initiation issued by the educational institution or funding agency, declaring the project's duration.

**1.3.7.** Copy of a document proving monitoring activities issued by the educational institution.

**1.3.8.** Copy of a document proving patent deposit or grant, accepted only from official patent granting institutions (*e.g.*, INPI in Brazil).

**1.3.9.** Copy of the certificate of completion of a *lato sensu* postgraduate course, with proof of total course hours.

**1.4. Copy of Undergraduate Academic Transcript:**

- Required for verification of academic history.

**1.5. Copy of CPF and RG:**

- **Note:** Driver's license is not valid. For foreign candidates, these documents must be replaced by copies of the identifying pages of the passport.

**2. DOCUMENTS REQUIRED FOR DOCTORATE AND DIRECT DOCTORATE SELECTION APPLICATION**

**2.1. DOCTORATE (with prior master's degree obtained):**

**2.1.1. Application Form:**

- The application form is available at Application Form Link:  
<https://cpg.eel.usp.br/aluno/formularios/inscricao-para-selecao>.

**2.1.2. Copy of Master's Academic Transcript:**

- Required for verification of master's level academic history.

**2.1.3. Annex 1:**

- Must be completed, including only the curricular items to be scored in the selection process. Attach simple copies of the corresponding proofs. The required proofs include:
  - 2.1.3.1.** Copies of the first pages of publications in journals, and for articles accepted for publication, proof of acceptance (*e.g.*, an email from the journal editor).
  - 2.1.3.2.** Copies of the covers of published books showing the authors' names, and for book chapters, include the first page of the chapter.
  - 2.1.3.3.** Copies of the entire content of full papers published in conference proceedings.
  - 2.1.3.4.** Copies of abstracts published in conference proceedings.
  - 2.1.3.5.** Copy of proof of oral presentation of work at a conference.
  - 2.1.3.6.** Copy of a document proving participation in scientific initiation issued by the educational institution or funding agency, declaring the project's duration.
  - 2.1.3.7.** Copy of a document proving monitoring activities issued by the educational institution.
  - 2.1.3.8.** Copy of a document proving patent deposit or grant, accepted only from official patent granting institutions (*e.g.*, INPI in Brazil).
  - 2.1.3.9.** Copy of the certificate of completion of a *lato sensu* postgraduate course, with proof of total course hours.

**2.1.4. Copy of Undergraduate Academic Transcript:**

- Required for verification of undergraduate academic history.

**2.1.5. Copy of CPF and RG:**

- **Note:** Driver's license is not valid. For foreign candidates, these documents must be replaced by copies of the identifying pages of the passport.

**2.2. DOCUMENTS REQUIRED FOR DIRECT DOCTORATE SELECTION APPLICATION**

**2.2.1. Application Form:**

- The application form is available at Application Form Link  
<https://cpg.eel.usp.br/aluno/formularios/inscricao-para-selecao>.

**2.2.2. Copy of Undergraduate Academic Transcript:**

- Required for verification of undergraduate academic history.

### **2.2.3. Annex 1:**

- Must be completed, including only the curricular items that receive points in the selection process. Attach simple copies of the corresponding proofs. The required proofs are listed in item 2.1.3.

### **2.2.4. Research Project:**

- Should be a maximum of 20 pages.

### **2.2.5. Letter from the Advisor:**

- This letter must contain justifications for the request, based on the merit and originality of the proposed research work, the candidate's academic performance, and their scientific maturity for a direct doctorate.

### **2.2.6. Copy of CPF and RG:**

- **Note:** Driver's license is not valid. For foreign candidates, these documents must be replaced by copies of the identifying pages of the passport.

## **3. CRITERIA FOR SELECTION OF MASTER'S, DOCTORATE, AND DIRECT DOCTORATE**

The complete selection process will consist of assigning scores based on the compilation of curricular information presented in Annex 1 and the corresponding supporting documents, in addition to the score assigned to the written exam.

### **3.1. Written Exam:**

- The written exam will consist of ten questions, each worth one point, with scores ranging from 0 (zero) to 10 (ten) points. **The written exam will be eliminatory in nature. Candidates who score less than 5 (five) will not proceed to the curriculum analysis phase.**

### **3.2. Final Score Calculation:**

- The final score will be calculated as follows:
  - **For candidates with a written exam score of 7.0 (seven) or higher:**
    - The final score will be the highest of the following:
      - **3.2.1.1.** Score from the written exam.

- **3.2.1.2.** Score calculated from Equation 1:

$$\text{Score} = [0.5 \times (\text{Curricular Information}) + 0.5 \times (\text{Written Exam})] \quad (\text{Equation 1})$$

- For candidates with a written exam score lower than 7.0 (seven) and equal or greater than 5 (five):
  - The final score will be as per Equation 1 mentioned in item 3.2.1.2.

### **3.3. Curricular Information Score:**

- The compilation of curricular information will yield a score from zero to ten points, with the score assigned according to item 5.

### **3.4. Classification:**

- A candidate will be considered classified if they achieve a final score of 5.0 (five) or higher at the end of the selection process.

### **3.5. Approval:**

- Candidates classified with the highest averages will be approved within the limit of the program's available slots. The results will only inform whether a candidate has been approved or disapproved, regardless of the ranking order.

### **3.6. Tiebreaker Criteria:**

- In case of a tie at the cutoff position due to the pre-set number of available slots:
  - The tiebreaker will be the highest score on the written exam.
  - If the tie persists, the tiebreaker will be based on the highest score for the academic performance coefficient from the undergraduate transcript for Master's and Direct Doctorate candidates, or from the master's for Doctorate candidates.
  - If the tie persists, preference will be given to the older candidate.

### **3.7. Language of the Exam:**

- The exam will be available in Portuguese and English and can be answered in either language.

#### **4. SPECIFIC CRITERIA FOR THE SELECTION OF DIRECT DOCTORATE**

##### **4.1. Classification for Project Defense:**

- A candidate will be considered classified for the project defense stage if they meet the criteria outlined in item 3.4 of this announcement.

##### **4.2. Evaluation by Examining Committee:**

- The classified candidate will be subjected to an Examining Committee to assess their scientific maturity and the suitability of the research for the Doctorate level.

##### **4.3. Communication of Defense Date:**

- The date for the Research Project Defense of candidates classified for the Direct Doctorate will be communicated later by the PPGBI Secretariat.

##### **4.4. Evaluation Criteria:**

- The evaluation of the research project will consider, in addition to the written text, the candidate's performance in:

###### **4.4.1. Oral Presentation:**

- The presentation of the Research Project must last a minimum of 20 (twenty) minutes and a maximum of 30 (thirty) minutes. Candidates whose presentations fall outside this time range will be disqualified.

###### **4.4.2. Questioning:**

- The project will be questioned by the members of the Examining Committee.

##### **4.5. Composition of the Examining Committee:**

- The Examining Committee, appointed by the Program Coordination, will consist of at least 3 (three) members, all holding a minimum of a Doctorate degree. The future advisor cannot be part of this committee.

##### **4.6. Approval Criteria:**

- A candidate will be considered qualified for the Direct Doctorate if they receive approval from most of the Examining Committee members. Otherwise, they may be recommended for enrollment in the master's program of the same program.

##### **4.7. Approval Based on Average Scores:**

- Candidates classified with the best averages will be approved within the limit of the program's available slots. The number of slots for the Doctorate includes those for both the Doctorate and Direct Doctorate.

## **5. CRITERIA FOR ANALYZING CURRICULAR INFORMATION IN ANNEX 1**

### **5.1. Calculation of Curriculum Information Score:**

- The score corresponding to curricular information will be calculated by summing the points awarded for the following items:
  - a) "0.5 x average of the subjects," where this average is calculated based on the academic transcript as per item 5.2.
  - b) Scientific initiation.
  - c) Undergraduate monitoring.
  - d) Publications.
- **5.1.1.** If the sum of the points exceeds ten points, the candidate will receive a score of 10 (ten).
- **5.1.2.** Undocumented information will not be considered in the selection.

### **5.2. Average of Subjects:**

- For candidates applying for the Master's and Direct Doctorate, the grade point average from their undergraduate transcript will be considered. For Doctorate candidates, the grades listed in their Master's transcript will be evaluated. The average grade from the courses taken during the master's program will be calculated as follows:
  - Each grade of A, B, C, and D will be assigned scores of 10.0, 7.5, 5.0, and 0 (zero) points, respectively. The average will be calculated by summing the scores assigned to the respective grades obtained by the candidate and dividing by the number of courses taken.
- **5.2.1.** If any candidates have a maximum score that is different from 10 (ten), normalization will be applied to adjust the maximum score to 10 (ten).

### **5.3. Scientific Initiation:**

- 2.0 (two) points for periods equal to or greater than 6 (six) months with funding from a funding agency, regardless of the number of scientific initiation projects developed or total time.
- points for each month of scientific initiation without funding or for less than 6 (six) months of total funding, limited to a maximum of 2.0 (two) points.
- At the discretion of the CCP-PPGBI, activities classified as scientific initiation under another title may be considered if properly documented with official institutional papers.

#### **5.4. Undergraduate Monitoring:**

- 0.5 (half) point per semester, up to a maximum of 1.0 (one) point. Monitoring can only be considered if performed during the undergraduate program.

#### **5.5. Publications Where the Candidate is an Author:**

- **5.5.1.** Works published in conferences will only be counted if they have been presented.
- **5.5.2.** Points for Publications (maximum of 5 (five) points):
  - **5.5.2.1.** For each scientific article published in a journal or accepted for publication, the score will be based on the journal's qualifier, published by the "Journal Citation Report" (most current year available):
    - Impact Factor (IF)  $\geq$  2.0 (2.0 points)
    - IF  $\geq$  0.5 and  $<$  2.0 (1.0 point)
    - IF  $<$  0.5 or not measured by JCR (0.2 points)
  - **5.5.2.2.** For each patent filed or granted in which the candidate is an inventor: 1.0 point each.
  - **5.5.2.3.** For each full paper published in the proceedings of scientific events (equal to or greater than 3 printed pages in the event proceedings): 0.2 points (limited to 5 papers).
  - **5.5.2.4.** For each abstract published in the proceedings of scientific events: 0.1 point (limited to 5 abstracts).
  - **5.5.2.5.** If the conference paper was presented orally: 0.1 point additional for each paper scored according to items 5.5.2.3 and 5.5.2.4.



- **5.5.2.6.** For books and book chapters: 1.0 point each (limited to 3).

#### **5.6. *Lato Sensu* Specialization Course:**

- For a specialization course with a minimum load of 360 hours offered by an accredited higher education institution: 1.0 point, limited to one course.

### **6. TOPICS FOR THE WRITTEN EXAM**

#### **6.1. Biochemistry:**

- a) Amino acids and proteins
- b) Enzymes: kinetics and inhibition
- c) Sugars and polysaccharides
- d) Lipids
- e) Nucleotides, Nucleic Acids, and Genetic Information Technology
- f) Carbohydrate metabolism
- g) Lipid metabolism

#### **6.2. Chemistry:**

- a) Chemical bonds
- b) Shape and structure of molecules
- c) Fundamentals of physical equilibria (volatility and solubility)
- d) Acids and bases

#### **6.3. Microbiology:**

- a) Characterization of microorganisms
- b) Evolutionary microbiology and microbial diversity across the three domains
- c) Nutrition and cultivation of microorganisms
- d) Control of microbial growth

#### **6.4. References:**

##### **6.4.1. General Biochemistry and Genetics:**

- NELSON, D.L.; COX, M.M. Lehninger Principles of Biochemistry.

##### **6.4.2. Chemistry:**

- ATKINS, P.; JONES, L. Principles of Chemistry.

##### **6.4.3. Microbiology:**

- MADIGAN, M.T.; MARTINKO, J.M., DUNLAP, P.V., CLARK, D.F. Brock Biology of Microorganisms.

Additionally, a **tutorial** with typical examples of exam questions is available at the following link:

<https://sites.usp.br/ppgbi/wp-content/uploads/sites/212/2016/08/tutorial-para-candidatos-ao-PPGBI-atual.pdf>

## **7. SELECTION CRITERIA FOR CANDIDATES WITH SCHOLARSHIPS FROM ORGANIZATIONS, COMPANIES, OR OTHER NATIONAL OR INTERNATIONAL INSTITUTIONS**

The selection of candidates for the Master's, Doctorate, and Direct Doctorate programs who possess scholarships granted by organizations, companies, or other national or international institutions will consist of a curriculum vitae analysis conducted by an examining board designated by the Coordinating Committee of the Program. In this case, the maximum number of vacancies specified in this notice does not apply.

## **8. IMPORTANT DATES FOR THE SELECTION PROCESS**

### **8.1. Calendar:**

- **Registration:** May 5<sup>th</sup> to June 20<sup>th</sup>, 2025
- **Written Exam Date:** July 2<sup>nd</sup>, 2025
- **Results Announcement:** July 15<sup>th</sup>, 2025

### **Enrollment:**

- **Master's and Doctorate:** July 21<sup>st</sup> to 24<sup>th</sup>, 2025

**Important Note:** Candidates approved for the Doctorate or Direct Doctorate may enroll until November 7<sup>th</sup>, 2025.

**(Registration and/or Enrollment Hours:** 8:30 AM to 11:00 AM and 2:30 PM to 5:00 PM)

### **8.2. Written Exam:**

- **Start Time:** 8:30 AM (with a 10-minute tolerance)
- **End Time:** 11:30 AM (Brasilia Time, Brazil)

### 8.3. Conducting the Written Exam:

- The written exam will be conducted online, with questions available in both Portuguese and English.
- **Online Exam (Videoconference):** The link for accessing the Google Meet platform will be sent to the email provided in the candidates' registration form on July 2<sup>nd</sup>, 2025, at 7:45 AM (Brasilia Time, Brazil).

It is recommended that candidates access the link at least 20 minutes before the exam starts (expected to begin at 8:30 AM, Brasilia Time, Brazil).

- **Accessing the Exam Questions:** The link will be provided to candidates during the videoconference (via Google Meet), and the exam will conclude at 11:30 AM (Brasilia Time, Brazil).
- **Submitting the Exam:** At the end of the exam, there will be a button in the system for submitting the exam.

The exam must be submitted by 11:45 AM (Brasilia Time, Brazil) to avoid disqualification.

During the exam, candidates must remain on videoconference with their cameras on, which will be recorded for documentation purposes. Candidates are responsible for ensuring they have the necessary equipment and internet access for videoconferencing. At the beginning of the exam, candidates must present an official document with a recent photo to verify their identity. During the exam, candidates may be monitored by specific programs to detect fraud.

### 8.4. Enrollment Process

- Enrollment must be conducted at the **Secretary of the Graduate Committee (CPG) of EEL/USP** during the following hours:
  - **Morning:** 8:30 AM to 11:00 AM
  - **Afternoon:** 2:30 PM to 5:00 PM
- Enrollment must be completed by the candidate in person or by their legal representative.

## **9. DOCUMENTS REQUIRED FOR ENROLLMENT IN THE MASTER'S PROGRAM:**

### **9.1. Request for First Regular Enrollment:**

- Must be fully completed and signed, with agreement from the supervisor.
- If the student does not have a defined supervisor, the request must be signed by the Program Coordinator, who will act as the academic supervisor for a maximum of 120 days.

(Request form available at this link <https://cpg.eel.usp.br/formul%C3%A1rio-cpg>)

### **9.2. Copy of the Diploma or Certificate of Graduation Completion:**

- Must include the date of graduation.

### **9.3. Copy of the Undergraduate Transcript:**

### **9.4. Copy of the CPF:**

- Exempt if included on the RG (mandatory for foreigners).

### **9.5. Copy of the RG:**

- **Note:** driver's license, class registration, military registration, or others will not be accepted.

### **9.6. Copy of RNE (national registry of foreigners) or Protocol:**

- Must contain the type of Visa: Temporary IV or Mercosur or Permanent, for foreign candidates.

### **9.7. Copy of the Passport:**

- Must include the pages with identification, passport number, and validity for foreign candidates.

### **9.8. Copy of Birth or Marriage Certificate.**

### **9.9. One recent 3x4 photo.**

## **10. DOCUMENTS REQUIRED FOR ENROLLMENT IN THE DOCTORAL PROGRAM:**

### **10.1. Request for First Regular Enrollment:**

- Must be fully completed and signed, with agreement from the supervisor.

- If the student does not have a defined supervisor, the request must be signed by the Program Coordinator, who will act as the academic supervisor for a maximum of 120 days.

(Request form available at this link <https://cpg.eel.usp.br/formul%C3%A1rio-cpg>)

**10.2. Copy of the master's degree Diploma or Certificate of Completion.**

**10.3. Copy of the Undergraduate Degree Diploma.**

**10.4. Copy of the Undergraduate Transcript.**

**10.5. Copy of the Master's Transcript.**

**10.6. Copy of the CPF:**

- Exempt if included on the RG (mandatory for foreigners).

**10.7. Copy of the RG:**

- **Note:** driver's license, class registration, military registration, or others will not be accepted.

**10.8. Copy of RNE (national registry of foreigners) or Protocol:**

- Must contain the type of Visa: Temporary IV or Mercosur or Permanent, for foreign candidates.

**10.9. Copy of the Passport:**

- Must include the pages with identification, passport number, and validity for foreign candidates.

**10.10. Copy of Birth or Marriage Certificate.**

**10.11. One recent 3x4 photo.**

**11. DOCUMENTS REQUIRED FOR ENROLLMENT IN THE DIRECT DOCTORAL PROGRAM:**

**11.1. Request for First Regular Enrollment:**

- Must be fully completed and signed, with agreement from the supervisor.

(Request form available at this link <https://cpg.eel.usp.br/formul%C3%A1rio-cpg>)

**11.2. Copy of the Undergraduate Degree Diploma or Certificate of Completion:**

- Must include the date of graduation.

**11.3. Copy of the Undergraduate Transcript.**

**11.4. Copy of the CPF:**

- Exempt if included on the RG (mandatory for foreigners).

**11.5. Copy of the RG:**

- **Note:** driver's license, class registration, military registration, or others will not be accepted.

**11.6. Copy of RNE (national registry of foreigners) or Protocol:**

- Must contain the type of Visa: Temporary IV or Mercosur or Permanent, for foreign candidates.

**11.7. Copy of the Passport:**

- Must include the pages with identification, passport number, and validity for foreign candidates.

**11.8. Copy of Birth or Marriage Certificate.****11.9. One recent 3x4 photo.****12. FINAL CONSIDERATIONS:**

**12.1. Responsibility of CCP:** The Coordinating Committee of the Graduate Program in Biochemistry and Molecular Biology (PPGBI) is responsible for implementing the criteria outlined in this announcement, excluding the requirements for the First Regular Enrollment.

**12.2. Result Approval:** The approval of results will be conducted by the Graduate Committee (CPG).

**12.3. Handling Unforeseen Cases:** Any unforeseen cases will be resolved by the CPG. In the event of requests for exam reviews, the CCP of the Program will address these requests and inform the CPG. Requests for exam reviews must be submitted in writing within 2 business days after the results are announced.

**12.4. Validity of Selection:** This selection process will only be valid for the enrollment period specified in this announcement.

**12.5. Acceptance of Rules:** The application of a candidate implies acceptance of the rules and instructions for the selection process contained in this announcement and in any communications already issued or that may be made public.

## 12.6. Complementary Information:

- Scholarships Information:

For information related to scholarships from PPGBI/EEL-USP, visit: PPGBI Scholarships at <http://sites.usp.br/ppgbi/bolsas-de-estudo/>

- **Graduate Secretariat in Industrial Biotechnology:**

- **Phone:** +55 (12) 3159-5034
- **Website:** <http://sites.usp.br/ppgbi/>
- **Email:** [ppgbi@eel.usp.br](mailto:ppgbi@eel.usp.br)

- **Contact via Email:**

The PPGBI email is [ppgbi@eel.usp.br](mailto:ppgbi@eel.usp.br). All documents attached to emails should be in **PDF** format. All applications submitted via email will receive a confirmation of receipt. If this confirmation is not received within 2 business days, candidates should contact PPGBI at +55 (12) 3159-5034.

- **Graduate Committee - CPG/EEL-USP:**

- **Phone:** +55 (12) 3159-5051 or +55 (12) 3159-5015
- **Email:** [cpg@eel.usp.br](mailto:cpg@eel.usp.br)

## **ANNEX 1**

### **CURRICULAR INFORMATION FOR THE SELECTION PROCESS OF CANDIDATES FOR THE POSTGRADUATE PROGRAM IN INDUSTRIAL BIOTECHNOLOGY**

**Name:** \_\_\_\_\_

**Passport number:** \_\_\_\_\_

#### **CURRICULAR INDICATORS**

**As per item 5.1.2. Undocumented information will not be considered in the selection process.**

##### **Scientific Initiation**

Project Title:

Supervisor:

Duration in months:

Institution:

Funding Agency (if applicable):

##### **Undergraduate Monitoring**

Subject:

Course:

Institution:

Duration in semesters:

##### **Academic Transcript**

Course:

Institution:

Grade Point Average:



**Publications (List each one separately)**

- Scientific article published in a journal:  
Authors, title of the article, journal, volume, year, and start page
- Book or book chapter:  
Authors, book title/chapter, year of publication, start page
- Patent filed or granted:  
Inventors, patent title, year of filing or publication, patent number, filing institution
- Full paper published in the proceedings of a scientific event (equal to or greater than 3 printed pages in total):  
Authors, title of the paper, name of the event proceedings, year of publication, initial and final pages:  
Was it an oral presentation? (Yes/No): \_\_\_\_\_
- Abstract published in the proceedings of a scientific event:  
Authors, title of the paper, name of the event proceedings, year of publication:  
Was it an oral presentation? (Yes/No): \_\_\_\_\_

**Lato Sensu Specialization Course (minimum of 360 hours)**

Course:

Institution: